

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

APR 9 2007

OFFICE OF ENVIRONMENTAL INFORMATION

MEMORANDUM

SUBJECT: Final Report for the Assessment of the Quality System for Environmental

Programs by the Great Lakes National Program Office (GLNPO)

FROM: Reggie Cheatham, Director

Quality Staff (2811R)

TO: Gary V. Gulezian, Director

Great Lakes National Program Office (G-17J)

This memorandum transmits the Final Report for the assessment of the quality system supporting the environmental data activities conducted and funded by the Great Lakes National Program Office (GLNPO). The assessment was conducted on July 24-27, 2006, in Chicago Illinois. The attached report summarizes the results from this assessment and proposed corrective actions by the GLNPO. As reflected in Appendix C, only two of the corrective actions (2 a. and 2b.) are still open. This is commendable. We are looking forward to your report on completion of all the corrective actions, at which time we will close out the assessment.

I appreciate the cooperation and assistance of Louis Blume, your QA Manager in facilitating the GLNPO assessment. I also wish to thank all of the managers and staff who prepared for the assessment and took time to meet with the assessment team. Their cooperation and assistance were key factors to our successful completion of this effort.

If there are any questions about the Final Report, please call me at (202) 564-6830 or Vincia Holloman at (202) 564-5176.

Attachment

cc: Louis Blume, QA Manager, GLNPO (G-17J)

Vincia Holloman, Team Lead, OEI/Quality Staff (2811R)

QUALITY SYSTEMS ASSESSMENT THE GREAT LAKES NATIONAL PROGRAM OFFICE CHICAGO, IL

FINAL REPORT

Quality Staff
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U.S. Environmental Protection Agency
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April 2007

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SUMMARY OF NOTABLE RESULTS

The finding listed here may be of particular importance to the management of the GLNPO Quality System. Details about this finding and other assessment results can be found in Section 3 of this report.

Findings:

- Several inconsistencies were noted in implementation of the GLNPO Quality Management Plan (QMP).
 - o Branch approval of quality plans in not occurring
 - o Incomplete implementation of the Agency's Information Quality Guidelines
 - Lack of compliance with Agency's peer review reporting and tracking requirements
 - Lack of procedures for version control of disseminated information on the GLNPO Web sites
- GLNPO has not fully implemented QA procedures for approving and documenting QA requirements for procuring work via contract.
 - Lack of required organization Quality Assurance Review Form for documenting QA requirements
 - o Lack of required contractor quality planning documents

Noteworthy Observations and Practices:

- The GLNPO has implemented several noteworthy quality management processes for
 assuring and documenting the quality of its environmental data operations. QA is
 managed at the project level and the graded approach is applied. Tools implemented by
 the QA Manager for tracking QA requirements ensure planning for the appropriate
 quality of QA prior to data collection and use. Deficiencies are tracked and resolved with
 management input.
- The GLNPO Quality System practices are supported by management and staff.

 Management is routinely briefed on progress of the program and is actively involved in issues that enhance and improve implementation of the GLNPO Quality System.
- QA training is continuous and valued by all. QA Staff, Lake Team Leads, Project Officers and Managers were very knowledgeable about EPA's Quality System, and their roles and responsibilities for implementing GLNPO Quality Management Plan.
- Across GLNPO, assessment of the quality of existing data and documentation of the quality of existing data for intended use is a standard practice. This is commendable as the Agency is still attempting to define requirements for usability of existing data.

- There are excellent examples of innovative approaches to managing environmental data and information at the GLNPO. Major programs, including grants have incorporated QA requirements throughout the lifecycle of projects.
- The Great Lakes Legacy Act Program has developed very comprehensive approaches for quality management that entail "cradle-to-grave" QA requirements. These approaches adopt the best practices for sediment remediation and are endorsed by all stakeholders.
- GLNPO has implemented several electronic databases and Web-based tools that facilitate data management and information sharing.
- Centralization of project files and QA records provide easy access to complete information for decision-making. Management controls and oversight of the filing system appears to be efficient and effective for GLNPO programs.

1. BACKGROUND AND PURPOSE

EPA Order 5360.1 A2, Policy and Program Requirements for the Mandatory Agencywide Quality System (Order), (Ref. 1), mandates that all EPA organizations conducting programs involving the collection and use of environmental data¹ have a quality system in operation to support their environmental programs. Each quality system must be described in an approved Quality Management Plan (QMP) that details the policies and procedures, roles and responsibilities, quality assurance (QA) and quality control (QC) activities used to plan, implement, and assess the effectiveness of the quality system. The Office of Environmental Information (OEI) is responsible for reviewing and approving these QMPs for the Agency.

EPA policy also requires OEI to perform periodic management assessments of all EPA organizations conducting environmental programs to determine the effectiveness of their mandatory quality systems. Accordingly, the Assistant Administrator for OEI has directed the Quality Staff to assess all Agency organizations collecting or using environmental data for decision making on a recurring basis. In response to this directive, the Quality Staff conducts Quality Systems Assessments (QSA). The QSA process verifies, by examination and evaluation of objective evidence, that the quality system is appropriate for the organization's environmental data operations. It assesses conformance of the implemented quality system with Agency quality policies as defined by the Order and the EPA Manual 5360 A1 (*Quality Manual*) (Ref. 2), compliance of the organization with Federal extramural regulations pertaining to quality (48 CFR Part 46), and compliance with financial assistance regulations (40 CFR Parts 30, 31, 35). It also assesses conformance of the implemented quality system with the approved QMP and determines the effectiveness of the quality system in assuring that the results from the environmental programs are adequate and sufficient for their intended use.

The assessment results are classified as follows:

Finding – An assessment conclusion that identifies deficiencies in implementing the quality system.

Observation – An opportunity for operational improvement, non-critical discrepancy (i.e., no corrective action required); Noteworthy practice of benefit to the organization.

Recommendations, if given, are usually derived from examples of exceptional practice by similar organizations. The organization is cautioned that it assumes responsibility for any actions it takes to implement them.

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¹Environmental data include any measurements or information that describe environmental processes, location, or conditions and health effects or consequences. For EPA, environmental data include information collected directly from measurements, produced from models, and compiled from other sources such as data bases or the literature, and used for decision-making purposes.

2. ASSESSMENT SCOPE

This report summarizes the results of the QSA of the GLNPO conducted on July 24-28, 2006. The review team consisted of Vincia Holloman of the Office of Environmental Information, Quality Staff, and Robert Shippen, the Quality Assurance Coordinator of Office of Water, Standards and Health Protection Division.

The *Quality Management Plan for the GLNPO*, April 2003 (Ref. 3), was used to determine the scope and the criteria for this assessment.

The assessment process included a review of the GLNPO mission, organization, and quality system documentation, and interviews with the GLNPO managers and staff responsible for planning and implementing the GLNPO quality system. Additionally, records and files that document the GLNPO QA processes and activities supporting environmental data operations were reviewed.

The specific objectives of the assessment, summarized from the assessment plan transmitted to the GLNPO on July 7, 2006, included evaluation of conformance to the GLNPO QMP and the effectiveness of the implementation of the quality system for the following environmental programs:

- surveillance, sampling, and monitoring activities of the Great Lakes
- pollution prevention
- sediment assessment and remediation
- ecological protection and restoration
- fish monitoring
- nutrient and biological criteria
- open lakes organics monitoring
- Great Lakes Legacy Act
- financial assistance agreements
- Information Quality Guidelines Implementation
- Peer Review and Science Inventory
- information and records management

3. RESULTS AND RATIONALE

The GLNPO has implemented the approved organization-wide QMP (April 2003). Overall, the quality system governing the quality of the GLNPO environmental data operations appears to be effective; however, there were some non-conformances noted. The assessment revealed two findings that require corrective action by management and several noteworthy, best practices.

Finding 1: Several inconsistencies were noted in implementation of the GLNPO OMP.

Branch Approval of Quality Plans: Branch managers are not involved in the approval of QA planning documents. The GLNPO QMP states that the QA Manager and the Branch Chief will review and approve data quality objectives (DQOs) and quality requirements for various projects (Section 2.2). There was no documented evidence of Brach Chief's approval of project specific quality documentation. Review and approval of QA documentation are accomplished by the Quality Management Team Leads, the Project Officers and the QA Manager. QA is managed at the project level and a checklist (Appendix F) developed by the QA Manager guides the systematic planning process and approval of QA requirements for projects. This process appears to be working well for current GLNPO projects.

Information Quality Guidelines implementation: Processes for implementation of EPA's Information Quality Guidelines (IQGs) are not well defined. It is commendable that the GLNPO QMP contains guidance for compliance with EPA's guidelines for maximizing the "quality, integrity and utility" of information disseminated on the GLNPO Web sites (Section 5.3). However, processes for determining IQG criteria for projects, and controls for assuring pre-dissemination review of disseminations on GLNPO Web sites and for responding to challenges to the disseminations were not clear. The IQG lead person and their responsibilities were not clearly identified. GLNPO is currently developing procedures for implementing the IQGs and for documenting pre-dissemination activities.

Peer Review/Science Inventory reporting: The assessment team could not determine GLNPO criteria for peer review of work products or tracking and data entry of science activities in the Agency's Science Inventory database, as specified in the GLNPO QMP. Furthermore, there was no evidence that entries of various products that met the criteria had been submitted to the database. Section 7.3 of the QMP requires processes in place to assist in compliance with the Agency's Peer Review Policy and requires project summaries for each fiscal year to be added to the GLNPO science category and to the QATRACK.

Version control of disseminated information on the GLNPO Web sites: The version of the GLNPO QMP currently distributed on the GLNPO Web site, and used in preparing for the assessment did not reflect the roles and responsibilities of the Lake Team Leaders. Additionally, some Standard Operating Procedures were found to be outdated. Implementation of processes governing accuracy, integrity and transparency of disseminated information ensures information used by GLNPO programs is current and conforms to the IQGs.

Finding 2: GLNPO has not fully implemented QA procedures for approving and documenting QA requirements for procuring work via contract.

Quality Assurance Review Form: GLNPO does not currently have in place a QA Review Form (QARF) for work procured via contracts as required by 48 CFR 46. This Federal regulation requires compliance with higher-level quality standards in solicitations and contracts when the contract requires such things as: "1) Control of such things as work operations, inprocess controls, and inspection; or 2) Attentions to such factors as organization, planning, work instructions, documentation control, and advanced metrology." A QARF (or similar form) is required to document QA requirements prior to funding and start of work. The GLNPO has recently contracted with Industrial Economics Incorporated a mission contract for professional services support for <u>all</u> the Great Lakes programs. Review of the statement of work suggests that activities may include environmental data operations requiring a QARF.

Contractor documentation of compliance with QA requirements: EPA Order 5360.1 requires documentation of the contractor's ability to meet QA requirements via a QMP and/or QA Project Plan. The technical proposal for the Industrial Economics Incorporated contract included a statement on the need to develop and implement quality management plans "consistent with EPA standards;" however, this plan had not been accomplished. Additionally, GLNPO's QMP requires review and approval of all procurement packages and associated quality system documentation by the QA Manager prior to funding (Section 4.2). Interview with the QA Manager indicated that this review had occurred and tracked as a delinquency yet it was not implemented by the appropriate Project Officer and Branch Chief.

Contracts Management Manual: The GLNPO QMP requires that a copy of the EPA 1900-Contracts Management Manual which specifies all required documents for developing contracts be maintained in the QA library (Section 4.2.2). The manual is a useful guide for Project Officers and Work Assignment Managers on QA requirements for procured work. This document was not available in the library.

Observation: The GLNPO has implemented several noteworthy quality management processes for assuring and documenting the quality of its environmental data operations.

Quality Assurance is managed at the project level at the GLNPO, with real-time oversight and direction provided by the QA Manager. The authority of the QA Manager is independent and supported by top management, and the QA organizational structure facilitates implementation of GLNPO Quality System. Across the GLNPO, there is an appreciation and value for planning and documenting QA requirements for products and services. Management controls exist for assuring that quality is integrated into programs that collect and use new and existing environmental data and information:

• The QA Manager's independence and access to management facilitate consistent implementation of GLNPO quality practices.

- The QA Manager's "staged approach" to QA encourages use of the graded approach based on the scope of the project and promotes continuous improvement in GLNPO quality program.
- The QA Manager tracks QA requirements and status of all projects. The deficiency tracking system assures that the level of quality planned for a project is appropriate for the intended use, and projects have required QA approval prior to data collection activities. QA documents reviewed were signed by the QA Manager and appropriate staff.
- QA is fully integrated in grants and cooperative agreements. Requests for proposals are systematically reviewed to ensure appropriate level of QA for the proposed work. Grantees are encouraged to use the QA Project Plan outline for submitting proposals. This best practice assures grantee incorporating QA in the planning phase of the project and facilitates timely review and approval of QA requirements by GLNPO during the grant award process. The QA Teams and QA Manager routinely oversee compliance with QA requirements during all phases of the project. There was documented evidence of timely review and approval of QA.
- QA training is continuous, and is systematically tracked for GLNPO management, QA staff and Project Officers. Those interviewed acknowledged the benefits of structured and just-in-time training provided by the QA Manager.
- The QA Manager's monthly meetings with the GLNPO Quality Team and the GLNPO
 Environmental Monitoring Indicators Teams is a best practice that works well for
 collaborating and sharing of information among the diverse programs supporting the
 Great Lakes. The monthly progress reports to management provide timely
 communication on the state of quality across the organization.

Observation: The GLNPO has implemented several innovative approaches to managing QA at the program and project level.

QA requirements are systematically planned using the DQO process. Major programs such as the Open Lakes Monitoring (Lake Guardian sampling activities), Open Lakes Organics Monitoring, the Biology Monitoring, the Great Lakes Fish Monitoring and the Legacy Act program were exemplary in systematic planning and documenting QA requirements.

The R/V Lake Guardian Position and Survey Progress Reports is an excellent approach to capturing and documenting monitoring activities of the Great Lakes. The Lake Team Managers interviewed were very knowledgeable about their QA roles and responsibilities. QA requirements were documented and appropriately approved.

 Management of the Great Lakes Legacy Act program is exemplary. Ensuring conformance with EPA's quality requirements was evident in the creative approach to planning and overseeing quality throughout the life of the project. The draft 2005 Quality Implementation and Management Plan is comprehensive. Quality Assurance Plans reviewed for the Black Lagoon and Ruddiman projects were detailed and appropriately approved. Standardized QA/QC checklists for collection and analysis of samples ensure consistency in data collection activities. Post project meetings with EPA, state partners and local advisory councils to review project with focus on detailing lessons learned is a best practice. Data Quality Assessment to determine opportunities for improvement is a critical component of the QA Project Plan. The Project Officers are to be commended for the documented life cycle management of the Great Lakes Legacy Act Program.

• It is noteworthy that in the absence of a GLNPO-specific QA Review Form, the contract with CH2M Hill for the Great Lakes Legacy Act program (RAC2-CH2M Hill; EP-S5-06-01) utilizes the QA Review Form developed by Region 5. The form documented the environmental data collection activities and QA requirements and was appropriately approved by the QA Manager.

Observation: Existing data are routinely assessed for their intended use.

Personnel interviewed were aware of the requirement for QA planning and documentation of acceptance criteria for existing data sources. Data Quality Assessment activities, the evaluation of data to determine appropriate quality and usability for intended use, were noted for several projects including:

- The Habitat and Invasive Species project established criteria for verification and validation of performance measures, and protocols to address missed requirements.
- The SOLEC program utilizes peer review as a mechanism for validating existing data sources prior to publication of reports.
- The Delta Institute project provided an example of assessment of data that were determined not suitable for the intended use of the project (project was terminated).
- In-depth analysis occurs of the Lake Huron zooplankton historical data prior to use.
- Data supporting the Great Lakes Legacy Act program are independently reviewed and verified. In-depth, external review of data by independent contractor ensures that GLNPO remediation of sediments in areas of concern is based on documented, defensible quality information. The assessment team reviewed contractor verification Standard Operating Procedures, general data review guidelines for completeness of data packages and evaluation of data quality, data verification reports, QA/QC analysis checklists, data review narratives and field audit reports.

Observation: The GLNPO has implemented several innovative approaches in electronically managing its environmental information.

- GLNPO has implemented electronic and centralized filing system for QA records. Most files reviewed were complete with the appropriate QA documentation. Especially noteworthy are the efforts by QA Manager and Intern to continually improve functionality and usability of the filing system for the GLNPO. Files are systematically and uniquely coded. Those interviewed appreciated the efforts of the file manager, and reported that the system we very effective.
- QATRACK facilitates timely review and approval of QA requirements for all GLNPO funded environmental activities.
- Web-based tools such as GLENDA and Query Manager standardize data reporting across programs.
- The GLNPO Sediment Data Tracking Database provides status updates for Hog Island, Black Lagoon, Ruddiman Creek, Ryerson Creek and Ashtabula. Project Leads are responsible for completeness, accuracy and integrity of data stored. Automated data processing checks are performed on final project data files prior to upload to the Great Lakes Legacy Act database and Agency databases. These pre-dissemination processes ensure transparency of the information and conformance to the IQGs.

These electronic and Web-based tools enhance timely collection, analysis, and sharing of information. However, some information, specifically the GLENDA database contained outdated versions of working documents. SOPs are needed for version control to ensure GLNPO personnel have access to most current data and information.

REFERENCES

- 1. EPA Order 5360.1 A2, <u>Policy and Program Requirements for the Mandatory Agency-Wide Quality System</u>, U.S. EPA, Washington, D.C. (May 2000).
- 2. EPA Manual 5360 A1, <u>EPA Quality Manual for Environmental Programs</u>, U.S. EPA, Washington, D.C. (May 2000).
- 3. Quality Management Plan for the GLNPO (April 2003).
- 4. <u>Power Point presentation on "Stages of Quality System Implementation"</u> in lieu of FY 2004 & FY 2005 Quality Assurance Annual Report and Work Plan

APPENDIX A

LIST OF PERSONNEL INTERVIEWED

Entrance Briefing

Gary Gulezian, Director GLNPO Paul J. Horvatin, Chief, MIRB Vicki Thomas, Chief PCCB David C. Cowgill, Chief, TAAB Louis Blume, QA Manager

Exit Briefing

Gary Gulezian, Director GLNPO
Paul J. Horvatin, Chief, MIRB
Vicki Thomas, Chief PCCB
David C. Cowgill, Chief, TAAB
Louis Blume, QA Manager
Chrissy McConaghy
Elizabeth Murphy
Marcia Damato
Frank Anscombe

Interviews

Policy Coordination & Communications Branch
Vicki Thomas, Chief
Michael Russ, Program Planning & Budget, Team Lead
Tony Kizlauskas, Comm. & Reporting, Team Lead
Ted Smith, Pollution Prevention, Team Lead
Marcia Damato
Frank Anscombe

Monitoring Indicators and Reporting Branch
Paul J. Horvatin, Chief
Louis Blume, GLNPO QA Manager
Chrissy McConaghy, ORISE Intern
Pranas Pranckevicius, Info. Mgt. & Data Int., Team Lead
David Rockwell, Great Lakes Monitoring, Program Lead
Kenneth Klewin, GLENDA Data Manager
Paul Betram, SOLEC
Glen Warren, Monitoring and Indicators, Team Lead
Melissa Hulting, IADN, Program Manager
Elizabeth Murphy, Fish Monitoring, Program Manager

Interviews

Technical Assistance and Analysis Branch
David Cowgill, Chief
Marc Tuchman, Sediment Assessment and Remediation, Team Lead
Karen Rodriguez, Ecological Protection and Restoration, Team Lead
Scott Ireland, Sediment Assessment and Remediation
Scott Cieniawski, Sediment QA Team

Lake Team Managers
Dan O'Rian, Lake Erie
Elizabeth LaPlante, Lake Superior
Jamie Schardt, Lake Huron

APPENDIX B

LIST OF DOCUMENTS AND RECORDS REVIEWED

GLNPO-WIDE

- 1. Great Lakes National Program Office (GLNPO) QA Team Reports (2005-2006)
- 2. GLNPO's Central Filing System
- 3. GLNPO Quality Assurance Library
- 4. GLNPO Quality Assurance Training Records
- 5. GLNPO Peer Review and IQG files
- 6. GLENDA database

MIRB

- 1. "Sampling and Analytical Procedures for GLNPO's Open Lake Water Quality Survey of the Great Lakes." (2005).
- 2. Data Verification Narrative for 2002 Chlorophyll Data
- 3. "Hydrophobic Organic Contaminants in Lake Michigan Water." QA Project Plan (2004).

 Monitoring HOCs in air through IADN Hulting
- 4. "IADN Peer Review SETAC meeting." Salt Lake City, UT; Nov. 15 and 16, 2002.
- 5. "Great Lakes Aquatic Contaminants Survey." QA Project Plan. (2004).
- 6. "Changes in the crustacean communities of Lakes Michigan, Huron, and Erie following the invasion of the predatory cladoceran *Bythotrephes longimanus*" (2004)
- 7. "Results From GLNPO's Biological Open Water Surveillance Program Of The Laurentian Great Lakes" (2002)
- 8. "Application of the Great Lakes National Program Office's Data Quality Objectives to Benthos Data Generated by the Annual Water Quality Survey" (2003)
- 9. "Variability of Crustacean Zooplankton Daa Generated by the Great Lakes National Program Office's Annual Water Quality Survey" (2003)
- 10. "Program Review of the Great Lakes Biology Monitoring Program", Briefing Book, (2005)
- 11. "Program Review of the Great Lakes Fish Monitoring Program", Briefing Book, (2005)
- 12. "Trends in Great Lakes Fish Contaminants: Quality Assurance Project Plan" (2004)
- 13. "Trends in Great Lakes Fish Contaminants: Project Report" (2004)
- 14. "Program Review of the Great Lakes Fish Monitoring Program" (2005)
- 15. "Chemical Analysis of Fish Tissue for the Great Lakes Fish Monitoring Program GLFMP): Quality Assurance Project Plan" (2006)
- 16. Great Lakes Fish Monitoring Program: Draft Quality Management Plan" (2002)
- 17. "Great Lakes Fish Monitoring Program: Quality Assurance Project Plan for Sample Collection Activities" (2004 draft)
- 18. "Report of the Fish Sampling Homogenization Audit of Axys Analytical Systems" (2005)
- 19. "Results from the U.S. Great Lakes Fish Monitoring Program and Effects of Lake Processes on Bioaccumulative Contaminant Concentrations" (2006)

20. "Great Lakes Fish Monitoring Program: Summary of Results for Performance Evaluation Samples Provided to the Potential Grantee Laboratories at Clarkson University, SUNY at Oswego, and SUNY Fredonia" (2006)

PCCB

- 1. "Results of the Lake Michigan Mass Balance Study: Mercury Data Report" (2004)
- 2. "Results of the Lake Michigan Mass Balance Study: Polychlorinated Byphenyls and *trans*-Nonachlor Data Report" (2004)
- 3. "Great Lakes Binational Toxics Strategy Quality Assurance Project Plan (QAPP), (2005 draft)

TAAB

- 1. "Great Lakes Legacy Act Quality Implementation and management Plan" (2005, draft)
- 2. "Hog Island Inlet Remedial Action Project Report" (2006 draft)
- 3. "Great Lakes Legacy Act Quality Implementation and Management Plan" (2005 draft)
- 4. "Remediation of the Black Lagoon Project Report" (2006 draft)
- 5. "Review of Data for Mercury at the Black Lagoon Sediment Remediation Site" (2006 draft)
- 6. "Review of Data for Oil and Grease at the Black Lagoon Sediment Remediation Site" (2006 draft)
- 7. "Review of Data for Polychlorinated Byphenyls (PCBs) as Arochlors for the Black Lagoon Trenton Channel, Detroit River Trenton, Michigan" (2006 draft)
- 8. "Review of Data for Total Polynuclear Aromatic Hydrocarbons (TPAHs) for Hog Island Inlet" (2006)
- 9. "Legacy Act Sediment Data Status Report"
- 10. "Field Audit Report, Ruddiman Creek Remediation Site" (2006 draft)
- 11. "Summary of the Post Project Meeting for Remediation of the Ruddiman Creek Main Branch and Pond" (2006 draft)
- 12. "QA/QC Analysis Checklist for Sediment Chemistry Analysis"
- 13. "QA/QC Analysis Checklist for Acute and Chronic Whole Sediment Toxicity Tests"
- 14. "General Data Review Guidelines For Use With Classicals, Metals, and Organics Methods" DynCorp (2002)

APPENDIX C

CORRECTIVE ACTION PLAN FOR THE GREAT LAKES NATIONAL PROGRAM OFFICE QUALITY SYSTEMS ASSESSMENT

#	Finding	Corrective Action(s)	Responsible Official	Due Date
1	Several inconsistencies were noted in implementation of the GLNPO QMP.	Revision of QMP to be consistent with actions defined below, and implement management controls to effect changes.	Louis Blume, QA Manager	3/15/2007
1a.	Branch approval of Quality Plans	QMP revision will remove statement that branch chiefs approve quality plans.	QA Manager and GLNPO	2/28/2007
		Delinquent quality documentation is discussed by the GLNPO Director, Branch Chiefs, and QA Manager during the midyear reviews of quality system implementation at the branch level meeting.	Managers	

1b.	Information Quality Guidelines implementation	IQG Lead designated as Communications and Reporting Team Leader and Policy & Communications Branch Chief (A. Kizlauskas/V. Thomas)	Team Leader and Branch Chief	Completed
		Document and implement pre-dissemination review procedures and approval form	GLNPO IQG Lead	2/15/2007
	·	For Web-disseminated products, Information Management Team (IMDI) Technical Assistance and Analysis Branch (TAAB) will implement WebDocs as the pre-dissemination review process.	Team Leader and Branch Chief (P. Pranckevicius & D. Cowgill)	2/15/2007
		Revise IQG Section of QMP.	IQG Lead	
lc.	Peer Review/Science Inventory reporting	Responsibility delegated to Monitoring, Indicators and Reporting Branch. (MIRB)	MIRB Branch Chief (P. Horvatin)	Completed
		Revise Peer Review Section of QMP.	Peer Review Coordinator (V. Santos)	2/15/2007
1d.	Version control of disseminated information	Establish version control procedure for GLNPO's Web Site.	TAAB Branch Chief and IMDI Team Leader	2/15/2007
			(Cowgill & Pranckevicius)	

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2	GLNPO has not fully implemented procedures for approving and documenting QA requirements for procuring work via contract	Develop management control to assure that quality is considered during procurement process.	PCCB V. Thomas, Branch Chief L. Blume, QA	2/15/2007
			Manager	
2a.	Quality Assurance Review Form	A draft form has been developed. Fraining on contracts quality	L. Blume, QA Manager	Completed
		implementation will be offered.		6/30/2007
2b.	Contractor documentation of compliance with QA requirements	Revised QMP due from Industrial Economics (IEc).	V. Thomas & A. Kizlauskas	2/15/2007
		IEc Work Assignments will be individually reviewed using the draft QARF.	L. Blume, QA Manager	
		Other GLNPO Contracts will be inventoried, using the QARF, and status of quality documentation will be reviewed.		2/15/2007

2c.	Contracts Management Manual	An electronic copy is available on GLNPO's server in the folder: G:\ALL\QA\Contracts Management Quality	L. Blume, QA Manager	Completed
		A hard copy will be kept by Cynthia Bowman (Document Control Coordinator) with the controlled copy of GLNPO's QMP.	L. Blume, QA Manager	1/2/2007
		Details will be covered in a Contracts Quality Training (see Corrective Action 2a.)	L. Blume, QA Manager	1/1/07 to 6/1/07